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CALFED Water Transfer Element

Draft Discussion Paper No. 1 - Transferable Water

Issue/Question

What constitutes transferable water? Specifically, when is saved or conserved water transferable?

Definition

Water Code sections 484 and 1725 suggest that transferable water is: water that would have been consumptively used or stored by the transferor, the transfer of which will not injure any legal user of water, and which will not unreasonably affect fish, wildlife, or other instream beneficial uses.

Summary

The question of what is transferable water depends on the nature of the transfer. There are several possible categories: transfer of surface water through groundwater substitution; direct groundwater transfer; transfer based on crop fallowing or crop shifting; storage water transfer; transfer of treated wastewater; transfer for instream use; transfer of CVP water under CVPIA; and transfer of saved or conserved water.

There is a difference of opinion as to what constitutes transferable water under California water law when the transfer is based on saved or conserved water. (Query whether there are differences regarding the nature of transferable water in other transfer categories?) The issue arises primarily out of a different interpretation of what is meant by "consumptive use". There is at least a perception among some stakeholders that state and federal rules on saved/conserved water transfers are inconsistent with each other and inconsistently applied.

Water users have no incentive to improve their application efficiency or invest in conservation measures if the water they save or conserve cannot be transferred.

On the other hand, the project operators are reluctant to approve transfers of water which, if not consumptively used, would accrue to the benefit of the projects or otherwise be available for downstream uses.

Applicable Law

California Water Code sections 109 and 475 establish state policy regarding water transfers.

Water Code section 484 says that temporary transfers of water do not prejudice the transferor's future right to the use of the transferred water and defines consumptively used water as water "which has been consumed by use through evapotranspiration (ET), has percolated underground, or has been otherwise removed from use in the downstream water supply as a result of direct diversion."

Water Code section 1011(b) provides that water, or the right to the use of water, the use of which has ceased or been reduced as the result of conservation may be sold, leased, exchanged or otherwise transferred.

Water Code section 1725 provides that a permittee or licensee may change the place of use (i.e., transfer) water "if the transfer would only involve the amount of water that would have been consumptively used or stored by the permittee or licensee in the absence of [the transfer], would not injure any legal user of the water, and would not unreasonably affect fish, wildlife or other instream beneficial uses. For purposes of this article, 'consumptively used' means the amount of water which has been consumed through use by evapotranspiration, has percolated underground, or has been otherwise removed from use in the downstream water supply as a result of direct diversion."

Water Code sections 1745.04 and 1745.05 provide that a water supplier may transfer water from storage, water made available by crop shifting or fallowing, or water made available by "conservation or alternative water supply measures ...".

Collectively, these provisions establish a clear policy and legal authority for water transfers based on conservation and reductions in consumptive use. However, they leave open the question of what is meant by consumptive use; in particular, they leave open the question whether an improvement in application efficiency which reduces tail water, return flows or percolation to usable groundwater is a reduction of consumptive use, and therefore creates transferable water.

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Discussion

The major difference in the views articulated by the project operators and the stakeholders on the question what constitutes transferrable water seems to hinge on the definition of "consumptive use". Some stakeholders argue that the agencies interpretation of "consumptive use" is too narrow and effectively precludes a transfer of saved or conserved water as defined by Water Code section 1011(b). The stakeholder argument is that the narrow definition of consumptive use applied by DWR and USBR effectively limits transferable water to reductions in ET (which can only be accomplished by fallowing or crop changes) and reductions in percolation to unusable groundwater (which occurs only in a few geographic areas of the state).

Stakeholders do not dispute that the law allows the transfer of water held under right (including permit, license or contract) only if that water would otherwise be consumptively used, and subject to the "no injury" and "no unreasonable affect" rules. However, some argue for a broader interpretation of reduction in consumptive use, which includes reduction in application of water, improvement in application efficiency and reductions in tail water, return flow or water which would percolate to usable groundwater.

Over the past several years, water suppliers generally have been encouraged by state law to adopt and implement water conservation plans. CVP contractors are required by federal law to adopt and implement such plans. The public policy intent behind water conservation is that reductions in applied water and improvements in application efficiency will make the saved or conserved water available for other beneficial uses. But if saved or conserved water is not transferable water, there is little, if any, financial incentive to adopt and implement conservation measures. Additionally, there is a concern that conservation measures may actually create a risk to water rights or contract rights to water, if the saved/conserved water is not continually and regularly put to beneficial use.

In DWR's 1993 publication "Water Transfers in California, Translating Concept into Reality, there is a discussion of conserved water transfers in the Sacramento Valley. A key point is that "... new water can be created only by reducing losses to unusable water bodies (rare in the Sacramento Valley), reducing surface outflow during periods of excess Delta outflow, reducing consumptive use of crops, or environmentally acceptable reductions in consumptive use of non-agricultural vegetation. Reducing percolation to groundwater depletes another part of the system and can penalize other users (by direct reduction of ground water supplies, decreasing groundwater discharge to surface streams or increasing percolation from surface supplies to groundwater. Reducing drainage outflow during the irrigation season merely reduces the supply available downstream".

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"New water" is defined as water not previously available in the system, created by reducing irrecoverable losses or flow to unusable water bodies. New water must also be "real water" which is defined as water not derived at the expense of any other lawful water user. ("Real water" is generally synonymous with "wet water".) "Real" or "wet" water must be distinguished from "paper" water which is water that does not create any increase in the water supply, such as water under right but not historically used or tailwater or return flows.

Until recently the USBR interpretation of saved/conserved transferable water was similar to that of DWR. However, there have been at least two transactions in 1997 in which USBR took a more flexible position: the OID transfer to USBR/USFWS for supplemental fish flows on the Stanislaus River and the transfer of San Joaquin River Exchange Contract water to the Grasslands area wildlife refuges. In these transactions, a strict definition of reduction in consumptive use was not applied. The OID transfer is based on a simple reduction in direct diversions. The Exchange Contract transfer is based on a reduction in tail water and return flows by improvement in conveyance and application efficiency.

Options for resolution of this issue

It has been suggested that one way to resolve the question of what constitutes transferable water based on conservation measures is to put the decision in the hand of some entity other than the project operators, perhaps the State Water Resources Control Board.

It has also been suggested that a standardized set of policies and rules on transferable water generally, agreed to by USBR, DWR and the State Board, would be helpful in clarifying the agencies' interpretations of the legal requirements for stakeholders.

Alternatively, if the problem is that the existing law is not clear on this point, then the law should be amended to state clearly the circumstances under which saved or conserved water is transferable.

Water Transfer Discussion Papers

Issue 2

Regulatory Processing/Streamlining

Background

To initiate a transfer the owner of a water right is required to file a petition with the State Water Resources Control Board (SWRCB) under Water Code Section 1725 et seq. (short-term) or Section 1735 et seq (long-term). Most transfers are short-term (one year or less). (This paper therefore will focus on the process for the short-term transfers.) Because of the short-term nature of the transfers, there is normally some urgency associated with the processing and approval of the transfer. The SWRCB requires the petitioner to provide information on the amount of water to be transferred, the existing and new places of use, the parties involved in the transfer, and the anticipated environmental effects of the proposed transfer. Once the information is received the SWRCB issues a public notice of the proposed transfer. The public then has the opportunity to file objections to the transfer. (Many transfers are non-jurisdictional for the SWRCB and therefore no petition need be filed. Examples are transfers involving pre-1914 water rights or those that do not involve transferring water outside of the existing place of use specified in a post-1914 water right.)

Before the SWRCB can approve a transfer, it must make the following findings:

- The transfer would only involve the amount of water that would have been consumptively used or stored by the water right holder in the absence of the transfer.
- The transfer would not injure any legal user of the water.
- The transfer would not unreasonably affect fish, wildlife, or other instream beneficial uses.

If the SWRCB cannot make the above findings within 60 days of receipt of the petition or within any extension of that period approved by the water right holder, the SWRCB is required to set the matter for hearing. The SWRCB will then issue an order approving or denying the transfer based on the hearing record.

Temporary transfers under Section 1725 are exempt from the California Environmental Quality Control Act (CEQA).

Following the expiration of the transfer period, all rights

automatically revert to the original holder of the water right without any action by the SWRCB.

Issues

Because of the urgency often associated with short-term transfers, they are often filed shortly before the parties would like to begin transferring the water. The SWRCB Division of Water Rights gives processing of transfer petitions the highest priority. However, when petitions are filed at the last-minute, the SWRCB is not always able to meet the schedule for beginning the transfer. To overcome this, the SWRCB has encouraged parties to file transfer petitions earlier, or discuss the transfer with staff as soon as it is conceived. Quite often the SWRCB is able to provide guidance on what information to provide and how to coordinate with other agencies. Transferring parties have been cooperative in this regard in recent years.

Even though short-term transfers under Section 1725 are exempt from CEQA, the SWRCB must still make a finding that the transfer will not unreasonably affect fish, wildlife, or other instream beneficial uses. To make this finding the SWRCB usually asks the petitioner to provide whatever information is needed. This finding is the most difficult to make for cross-delta transfers. The process has been facilitated in recent years because in the approval of the 1995 Bay-Delta Plan, the SWRCB evaluated the cumulative effects of transfers with the current operating criteria in the Delta. However, the USF&WS will request reconsultation under the ESA if transfers exceed 350,000 AF in any given year.

The SWRCB must also make a finding under Section 1725 that the water would have been consumptively used or stored in the absence of the proposed transfer. This finding can be difficult to make particularly in the case of a water right holder that also has a Bureau of Reclamation (Bureau) contract for water. In these cases the SWRCB must find that it is the water right holder's water that is being transferred not the Bureau's.

When previously stored water is being transferred there is an issue of refilling the reservoir without adversely affecting senior downstream water users. In these cases the SWRCB tries to develop some refill criteria that will protect downstream right holders. More work is needed to develop standard refill criteria and on "carriage water" requirements assessed by DWR and USBR for cross Delta transfers.

Solutions

1. Parties should be encouraged to discuss jurisdictional transfers with the SWRCB and file petitions as early as possible.

2. Parties should talk with the Department of Fish and Game (DFG), the Bureau, the Department of Water Resources (DWR), and other agencies as early as possible.

3. The methods for determining water availability and environmental effects must be clearly defined.

4. The parties should provide information on water availability and environmental effects as early as possible.

5. Develop refill criteria for transfers that involve previously stored water.

6. Develop standard environmental terms that will allow the SWRCB to make the necessary environmental findings.

7. The "carriage water" requirements assessed by DWR or USBR need to be re-evaluated.

Water Transfer Discussion Papers

Issue 3
Water Transfers for Fish or Wildlife
Under Water Code Section 1707

Background

California water law does not allow the appropriation of water for fish and wildlife uses. A key tenent in California's water law is the ability of the water user to take "control" of the water. Simply leaving the water in the stream for fishery purposes has not met the test for "control". However, in 1991 legislation was enacted that allows existing water right holders to dedicate all or part of their rights for instream purposes. The section of the Water Code that allows this type of change is section 1707. This section states:

> "(a) Any person entitled to the use of water, whether based upon appropriative, riparian, or other right, may petition the Board pursuant to this chapter, chapter 6.6 (commencing with Section 1435) or chapter 10.5 (commencing with Section 1725) for a change for purpose of preserving or enhancing wetlands habitat, fish and wildlife resources, or recreation in, or on, the water.
>
> (b) The Board may approve the petition filed pursuant to subdivision (a) subject to any terms and conditions which in the Board's judgement, will best develop, conserve, and utilize, in the public interest, the water proposed to be used as part of the change, whether or not the proposed use involves a diversion of water, if the Board determines that the proposed change meets all of the following requirements:
>
> (1) Will not increase the amount of water the person is entitled to use.
> (2) Will not unreasonably affect any legal user of water.
> (3) Otherwise meets the requirements of this division."

Sections 1435 and 1725 are water transfer sections in the Water Code. While the SWRCB has received a few requests for 1707 changes, only one has met the tests set forth above. It did not involve the Delta.

Issues

Section 1707 transfers raise the same issues of any transfer; (1)

is this real or paper water, (2) how is the water tracked to the place of use which could be the Delta or San Francisco Bay, (3) what are the effects on other legal users of water, (4) what are the environmental effects and (5) other typical transfer issues. All water transfers involving CALFED resources should go through a review process to ensure these issues and the ones below are addressed in a consistent manner.

There are some unique issues involved with 1707 transfers. These include the following: (1) The rights to 1707 water left in the stream are based on the priority date of the water right. Therefore, a user with a relatively recent water right may forgo his direct diversions in order to protect instream uses under section 1707 only to find that during water short periods more senior water right holders can legally divert this water downstream thus nullifying his efforts. (2) If the 1707 transferor has senior rights or the water involved is stored or otherwise foreign to the stream system, the issue then is protecting it from illegal diversion by water users with junior rights. (3) Once this water reaches the Delta, accounting for the water depends upon the desired use of the water. If the ultimate desired use of the water is to increase Delta outflow or other enhanced environmental protection beyond the existing standards, it must be accounted for differently than if it is intended to satisfy existing demands. All of these issues involve tracking the water to the place of use.

Solutions

The solutions to the unique issues of 1707 transfers can be divided into two parts: (1) upstream of the Delta and (2) in the Delta.

Upstream of the Delta the CALFED program needs to develop a procedure for tracking or accounting for allowable depletions that will accrue to 1707 transfers which are intended to reach the Delta. Each proposed 1707 transfer should have a procedure for calculating the amount of water that will reach the Delta based on the rights of the transferor, the amount of water released or bypassed and the timing of when it will reach the Delta. These are principally technical issues that need some very smart people to figure out.

Once a 1707 transfer reaches the Delta, the tracking depends on the use the transferor intends for the water. If the transferor has no special use for this water in the Delta, the water will be used to meet existing demands. Accordingly, the SWP or CVP could appropriate it to meet their obligations. In effect, this extra water would be exported or saved in upstream CVP or SWP reservoirs, because it would reduce the need for releases from

these reservoirs to meet demands in the Delta.

If the transferor wants the water to enhance conditions beyond the existing operating standards or contribute to Delta outflow in excess of the existing standards in the Delta, then the place of use of this water would include the entire Delta. As a result, the water would remain under the control of the transferor and could not be appropriated by another water right holder. Additionally, it would be necessary to ensure that the water actually improved the conditions in the Delta. One method of protecting the water would be to increase the standards each time a transfer is approved. This is cumbersome. Another alternative is to define how this water is to be tracked by the CVP and SWP when it gets to the Delta. For example, if the transferor desires the water to augment the San Joaquin River flows beyond the operating standards and to go out the Delta to augment Delta outflow during controlled flow periods, then a stipulation of the transfer would be that DWR and USBR would not count the 1707 transfer water as flow to meet the standards. If the actual flow was 5,500 cfs and 500 cfs was 1707 water tracked to the Delta, then the flow for the purpose of standards would be 5,000 cfs. This could be used for calculating inflow standards, export/inflow ratio, and/or Delta outflow depending on the desires of the transferror. The use of this method when water quality standards are controlling in the Delta needs more thought, but the general concept applies.

In summary, the major issues and solutions involving 1707 transfers are largely technical water tracking issues that involve consideration of the desires of the transferor on the ultimate use of this new water in the system.

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Draft Discussion Paper No. 4 - Access to CVP and SWP Facilities

Issue/Question

What are the rules for priority of access to CVP and/or SWP facilities for conveyance or storage of transferred water?

Summary

Stakeholders are concerned that long term transfers cannot be implemented without knowing whether and when the water will be pumped and conveyed to the transferee. This need for reliability is in conflict with the obligations of the CVP and SWP to move project water before moving transferred water.

Applicable Law - Water Code section 1810 et seq. provide that the owner of a water conveyance facility (including the State) must make up to 70% of the unused capacity of the facility available for transfers, subject to certain conditions. The owner of the facility is entitled to fair compensation and may establish terms and conditions for its use, including requirements for operations and maintenance, scheduling, water quality, terms of use, and priorities. The owner must also make findings of no injury to another legal user and no unreasonable impact on fish and wildlife.

Access to federal facilities is governed by the Warren Act of 1911 (43 USC sect. 523), which established the general conditions under which the USBR may enter into contracts to convey non-project water through federal facilities.

Discussion

Lack of reliability in the timing or availability of project facilities for pumping, conveyance and storage of transferred water is a strong disincentive to long term transfers. Buyers are not willing to purchase water not knowing whether or when it will be delivered.

Water transferred across the Delta must be pumped and conveyed by CVP or SWP facilities. Pumping and conveyance of project water has priority over non-project transfers. It is difficult for project operators to make firm commitments regarding the transfer of non-project water, more than a few months (sometimes, weeks) in advance, due to the many variable conditions in the Delta.

There would appear to be an inherent conflict in the Governor' water transfer policy that transfers should be an important part of providing water supply reliability and the projects position that contractor needs must always be met first.

As a practical matter, the availability of project pumping capacity for transfers has been further reduced in recent years by the pumping reductions in April and May and the additional "make up" pumping which must then occur in the fall of the year. The effect of these actions is to further narrow the window of time in which transfer water can be pumped from the Delta.

Options to resolve this issue

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Draft Discussion Paper No. 5 - Carriage Water

Issue/Question

How should carriage water requirements and/or the export/inflow ratio apply to transfers across the Delta?

Definition

Carriage water generally refers to the incremental amount of Delta outflow needed to prevent salinity intrusion or to maintain a controlling water quality standard, calculated as a percentage of the water transferred across the Delta or as a function of the export/inflow ratio of the May 1995 Water Quality Control Plan (WQCP).

Summary

Historically, water transferred across the Delta has been subject to a carriage water requirement, in some cases as much as 20% to 30% of the transferred quantity, imposed by the State Board at the direction of the SWP or CVP. More recently, the WQCP limits project exports to 35% or 65% of Delta inflow. There is a lack of clarity about what carriage water requirements would be imposed on a cross Delta transfer under the export/inflow ratio of the WQCP. Will the ratio apply in lieu of a carriage water requirement and if so, under what conditions? If not, how will the carriage water requirement be determined and under what conditions will it apply?

Discussion

High carriage water requirements add significant cost to a transfer and in some cases make a transfer economically infeasible. On the other hand, low or no carriage water requirements may require the CVP/SWP to in effect subsidize a transfer, if outflow requirements or the inflow/export ratio are controlling.

Some stakeholders argue that under the current WQCP, carriage water requirements should not apply so long as the water quality standards and outflow objectives are being met without reservoir releases from the CVP and the SWP (i.e., when the Delta is in excess conditions) and the export/inflow ratio is not controlling.

In other words, so long as the outflow and water quality standards are being met and the transfer does not increase the burden of these obligations on the projects, the transfer water should "ride on top" of project water as it comes across the Delta.

Project operators take the position that transfers should be subject to carriage water requirements, but that these may vary depending on outflow conditions, pumping levels and residual effects in the Delta. If the Delta is in balanced conditions and the projects are making storage releases to meet outflow or water quality requirements, the project operators will want to assess carriage water requirements. If the export/inflow ratio is controlling, the project operators will want the transfer to be subject to the same export limitation.

The foregoing discussion applies to transfers from the Sacramento or the San Joaquin system to the export service area. In addition, DWR and USBR have assessed a 5-10% conveyance surcharge on San Joaquin system transfers to account for losses from the point of release to Vernalis. Some stakeholders believe this requirement should be based on actual losses if these can be measured.

Options to resolve this issue

Develop rules and criteria for carriage water requirements based on conditions in the Delta and the actual quantities of water needed to maintain required salinity levels or outflows.

The State Board should have the authority to determine carriage water requirements for cross Delta transfers.

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Draft Discussion Paper No. 6 - Reservoir Refill Criteria

Issue/Question

What rules or criteria on reservoir refill should apply to transfers of water from reservoir storage?

Summary

DWR and USBR take the position that they are injured by a transfer of water from reservoir storage if the vacated storage space is refilled when the Delta is in balanced conditions. The position is based on the premise that the water required to refill the vacated storage space would otherwise be available to meet Delta outflow or water quality requirements, and in its absence the burden on the projects is increased as a direct result of the transfer.

Stakeholders may argue that a reservoir operator is entitled to the full benefit of his project, including the right to sell water from storage. Downstream appropriators cannot compel the continued storage of water, and logically should not be able to object to a change in the use of stored water. Refill criteria as imposed by DWR and USBR may create a benefit to the CVP and SWP as a result of the reservoir operation. (This analysis is probably different if projects other than CVP and SWP have obligations to meet water quality objectives in the Delta.)

Discussion

Refill criteria can be a deterrent to transfers. They create a risk that the reservoir operator will have to bypass flows which would otherwise be available for storage; this creates risk for the future water supply and power generation capacity of the reservoir operator.

Reservoir refill criteria have historically been imposed on short term (one year) transfers of water from reservoir storage if the transfer required use of CVP or SWP facilities for conveyance. DWR and USBR have imposed refill requirements as a condition of the use of SWP or CVP facilities and as a condition of non-opposition to the petition for temporary change in place of use.

Transfer proponents have generally not challenged the refill requirements due to the urgency of obtaining the temporary change permit from the State Board, but some stakeholders question whether DWR and USBR have a basis in California law for these requirements.

Presumably similar criteria would apply to a multi- year transfer. Stakeholders are concerned about the uncertainty on future water supplies created by having to bypass flows which could otherwise be used to refill the vacated reservoir storage space.

The project operators are concerned that without refill criteria, vacated storage space will be filled with water which would otherwise be available to meet Delta outflow or water quality requirements, or that reservoir refill will be delayed and that this delay will impact conditions in the Delta. Theoretically, the Delta could go into balanced conditions earlier in the year as a result of refilling vacated reservoir storage space created by a prior year transfer. The result would be that the CVP and SWP would have to begin making storage releases or reducing exports earlier than otherwise.

Options to resolve this issue

A possible resolution is to calculate the probability of reservoir refill impact for a transfer from a particular reservoir based upon the hydrologic record. That probability could then be converted into a percentage reduction in the storage release which is transferable. For example, if there is a 5% probability that the transfer of stored water from a particular reservoir will impact the Delta, and there will be a 20% carriage water requirement across the Delta, the transferable portion of the storage release would be 75%.

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Draft Discussion Paper No. 7 - Groundwater Transfers

Issue/Question

What should the CALFED policy be regarding transfers of groundwater? What policy, rules or criteria are needed to protect local groundwater resources from impairment due to transfers?

Summary

Some stakeholders believe that ground water transfers or surface water transfers based on groundwater substitution, unless properly regulated, will result in adverse impacts to groundwater resources, with significant adverse environmental and economic effects, in the source water area. Several Sacramento Valley counties have passed ordinances restricting or limiting the export of groundwater. Similar ordinances have been considered by some San Joaquin Valley counties.

Currently, there is no mechanism in state law for watershed based management of groundwater resources. This may lead to inconsistent or conflicting approaches to groundwater management by local agencies, with adverse effects on the development of a statewide water transfer market.

The potential for adverse impacts to groundwater resources makes transfers politically sensitive in source water areas, such as the Sacramento Valley. The absence of any mechanism for watershed based groundwater management makes it more difficult to develop conjunctive use programs and other tools for more effectively managing groundwater and surface water.

Discussion

There are two related sets of issues. First, when and subject to what conditions can groundwater be directly transferred and exported out of the basin? (A corollary question is whether the rules are or should be different for in-basin groundwater transfers?) What impacts should be considered - water quality, pumping levels, short term overdraft, long term overdraft, accretion to surface flows, others? Can transferred groundwater be replaced with surface water which becomes available later in the year?

Second, when can transferred surface water be replaced with groundwater? (A corollary question is whether the rules are or should be different for transfers of contract water and water rights water?) If the transfer is a surface water transfer with groundwater replacement, can replacement be done concurrently with the period of the transfer or can it be done later in the year?

There is little statutory authority on direct groundwater transfers. Generally, groundwater cannot be exported from the legal Delta (Water Code section 1220.) It is not clear whether groundwater can be purchased for instream or outflow purposes from within the legal Delta.

In other geographical areas, the limits on groundwater transfers are the case law rules on appropriation of groundwater for use beyond the overlying lands. Generally, this means that only groundwater which is surplus to the needs of the overlying owners can be appropriated and exported for use on non-overlying lands. (But does this refer to "surplus" in real time, say the immediate water year, or it does mean "surplus" over some longer period of time, allowing for periods of groundwater recharge?) In some counties, particularly in the Sacramento Valley, county ordinances impose additional restrictions on the export of groundwater.

How are the rules different if the transfer is nominally of surface water but the surface water is replaced by groundwater so that there is no reduction in consumptive use by the transferor?

For contract water, section 1745 says no "replacement pumping" is allowed unless it is consistent with a groundwater management plan for that area or water supplier determines there will be long term overdraft impact. For water rights water or pre-1914 water, there appear to be no restrictions on replacement of transferred surface with groundwater.

With respect to impacts on CVP and SWP or use of CVP/SWP facilities for groundwater related transfers, the basic issue is whether a transfer of groundwater or a "pump and replace" transfer adversely affects stream flow by inducing a depletion from a stream flow at a time when the Delta is in balanced conditions, thereby compelling the CVP or SWP to increase reservoir releases to maintain outflow or salinity requirements in the Delta.

Options to resolve these issues

Additional data is needed regarding the Sacramento Valley groundwater basin. A better understanding of the relationships between surface water and groundwater and of the recharge capacity of the aquifer (or aquifers) would enhance the development of policy and regulations regarding the management of Sacramento Valley groundwater resources.

One possibility would be the formation of a regional entity, perhaps a joint powers agency of Sacramento Valley counties, to study the groundwater resources of the area and to provide technical review and advice to local agencies regarding transfers involving groundwater. CALFED could consider the governance and funding mechanism for such an entity.

Water Transfer Discussion Papers

Issue 8
Environmental Impacts and Effects on
Legal Users of Water

Background

Both the Governor's 1992 water transfer policy statement and the Water Code refer to the desire that water transfers not cause environmental impacts nor affect other legal users of water. The level of allowable impact on the environment is somewhat unclear. The Governors's water policy states that water transfers "must not cause harm to fish and wildlife resources and their habitats" and "not cause overdraft or degradation of ground water basins". By reasonable extension the Governor's policy also can be interpreted to include surface diverters. The Water Code has several provisions that allow changes to water right permits for the purpose of water transfers or leases. These include sections 1020, 1435, 1700, 1725 and 1735. Each of these sections require that the SWRCB make the following findings before approving a change in a water right permit to allow a water transfer: (1) the change will **not injure** any other legal user of water and (2) the change will not cause an **unreasonable** effect on fish or wildlife. Other findings are also required depending on the code section but the above two requirements are common to all sections on water transfers. In addition, all of the transfer provisions in the Water Code, except a 1725 transfer, are subject to the California Environmental Quality Act (CEQA). This act requires that the environmental effects be evaluated before an action is approved. In cases where the impacts are likely to be **significant** an environmental impact report must be prepared. A transfer under section 1725 is statutorily exempt from the provisions of CEQA. The preparation of an adequate CEQA document can take several months and even years to complete.

Issues

The issues involving environmental and water user impacts include:

- The type of analysis needed to critically evaluate the impacts of the water transfer on water users and the environment. The impacts of concern can include the effects of lower reservoir levels on water temperature and river flows and how this affects fish habitat downstream, stranding of eggs or young in periods following the transfer period, flow and diversion impacts in the Delta, water quality impacts in the

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summer if historic flows are shifted to other periods of the year for water transfers, water level impacts in the Delta due to additional exports; the list goes on.

- The time it takes to conduct such an analysis. Water transfers are often put together in response to changing and often critical water supply situations. The analysis of impacts can be time consuming and complicated.

- General acceptance of the analysis of impacts. In the haste to conduct needed analyses criticism can be levied that the analysis is not complete. Incomplete analyses foster unnecessary controversy and litigation.

- The time it takes to circulate documents and comply with the requirements under CEQA. The time it takes to prepare an in depth CEQA review can often delay a transfer long enough to make it impossible to complete. Many transfers now are either 1725 transfers (transfers involving conserved or previously stored water) or they qualify for one of the exemptions under CEQA.

- Concerns of some water right holders that change petitions require evaluation of impacts on "any legal user of water" not just those with "prior rights". California water law allows a water right holder to conserve water on his property to help irrigate other parcels covered by his water right without the need of concerns with the water supply impacts to other users (e.g., less return flow, changes in timing of return flows, etc). However, if a water right holder wants to transfer that water via a water right change petition, impacts to other water users must be evaluated and conditions included to mitigate for these impacts.

- Determination of who's water is being transferred. In the Sacramento River there is a commingling of natural flow which is available for appropriation and transfer by in-basin water right holders, and CVP and SWP stored water intended for their use.

  In order to determine if water is available for transfer, the amount of natural flow (including abandon flows) available under various priorities of rights needs to be determined. A key assumption in this determination is whether natural flow is used first to help meet Delta flow and quality standards before water available for transfer under various rights is determined.

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- Determination of what constitutes an "unreasonable effect" on fish or wildlife. There are no guidelines on what constitutes an unreasonable effect on fish or wildlife. In this changing landscape of water policy in California perhaps a case by case evaluation will remain to be necessary.

Solutions

Perhaps the only solution to the concerns with the impacts of water transfers on fish, wildlife and users of water is to have such impacts evaluated carefully well in advance of the proposed transfer. This requires some up-front planning on the part of the transferor. In the past such up-front analysis has been difficult due to the fact that transfers were relatively new, it takes time to negotiate a proposed transfer and the hydrology of the year is always changing. What may seem like a good idea in January may not make sense or the impacts may differ greatly once the summer rolls around. There needs be a commitment on the part of CALFED to insure that environmental impacts will be critically evaluated and mitigation measures developed in advance of asking the SWRCB to approve a water transfer. This may require a group of staff that conducts or oversees these analyses and coordinates with interested parties to make sure issues are properly addressed.